

PRODUCT IDENTIFICATION



Product Name: 10% Diluted Acetic Acid Food Grade

CAS Number: 64-19-7

Molecular Formula: $C_2H_4O_2$

Molecular Weight: 60.05 g/mol

Grade: Food Grade

Purity / Concentration: 10%

Synonyms: Diluted Acetic Acid, Vinegar Acid

PRODUCT OVERVIEW

Alliance Chemical offers high-quality 10% Diluted Acetic Acid in a reliable Food Grade formulation. This clear, colorless solution is rigorously tested to ensure a 10% assay with strictly controlled impurity levels, making it an ideal choice for food preservation and pH regulation.

Grade Significance: Food Grade status ensures that the product meets stringent purity standards, guaranteeing that it is safe for human consumption and free from harmful contaminants.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	10	9	11	Titration with standardized NaOH
Color (APHA)	APHA	10	—	20	APHA/Hazen visual comparison
Specific Gravity (20°C)	g/mL	1.008	1.003	1.013	Hydrometer or pycnometer at 20°C
Specific Gravity (25°C)	g/mL	1.01	1.005	1.015	Hydrometer or pycnometer at 25°C
Residue After Ignition	%	0.01	—	0.05	Gravimetric residue after ignition
Water Content	%	1	—	1.5	Karl Fischer titration
Aluminum (Al)	ppm	0.1	—	1	ICP-OES
Arsenic (As)	ppm	0.02	—	0.1	ICP-MS
Calcium (Ca)	ppm	200.0	—	1000.0	ICP-OES
Chromium (Cr)	ppm	0.02	—	0.2	ICP-OES
Cobalt (Co)	ppm	0.01	—	0.2	ICP-OES
Copper (Cu)	ppm	0.05	—	0.5	ICP-OES
Heavy Metals (as Pb)	ppm	0.05	—	0.5	ICP-MS
Iron (Fe)	ppm	0.1	—	0.5	ICP-OES
Lead (Pb)	ppm	0.02	—	0.2	ICP-OES
Magnesium (Mg)	ppm	50	—	300.0	ICP-OES
Manganese (Mn)	ppm	0.05	—	0.5	ICP-OES
Nickel (Ni)	ppm	0.05	—	0.5	ICP-OES
Potassium (K)	ppm	100.0	—	500.0	ICP-OES
Sodium (Na)	ppm	1000.0	—	5000.0	ICP-OES
Zinc (Zn)	ppm	0.05	—	0.5	ICP-OES
Ammonium (NH ₄ ⁺)	ppm	1	—	5	Ion Chromatography (IC) or colorimetric kit
Chloride (Cl ⁻)	ppm	10	—	50	Ion Chromatography (IC) or IC-ICP
Nitrate (NO ₃ ⁻)	ppm	5	—	20	Ion Chromatography (IC)
Phosphate (PO ₄ ³⁻)	ppm	5	—	50	Ion Chromatography (IC)
Sulfate (SO ₄ ²⁻)	ppm	20	—	100.0	Ion Chromatography (IC)
Substances Darkened by H ₂ SO ₄	—	Passes test	—	—	Colorimetric comparison after H ₂ SO ₄ oxidation
Substances Reducing KMnO ₄	—	Passes test	—	—	Potassium permanganate time test
Acidity (meq)	meq	0.2	—	0.5	Acid-base titration
Aldehydes	ppm	1	—	5	Gas Chromatography (GC) with derivatization or HPLC

ND = Not Detected. Values are typical and may vary by lot.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid with mild vinegar odor	Odor	Pungent, vinegar-like odor
Form	Liquid solution	Boiling Point	118°C (244.4°F)
Melting / Freezing Point	16°C (60.8°F)	Flash Point	39°C (102.2°F)
Solubility	Complete water miscibility	Molecular Formula	C ₂ H ₄ O ₂
Molecular Weight	60.05 g/mol	Vapor Pressure (20°C)	15 mmHg
Viscosity (25°C)	1.2 cP	Refractive Index (20°C)	1.373
Density (25°C)	1.01 g/mL	Decomposition Temp.	Decomposes upon strong heating; Stable at ambient conditions

APPLICATIONS

- Food Processing** — Used as a preservative in pickling and vegetable storage to effectively inhibit microbial growth.
- Culinary Manufacturing** — Acts as a flavor enhancer for a wide range of salad dressings, gourmet sauces, and marinades.
- Food Safety** — Utilized to precisely adjust the pH levels of food products to ensure regulatory compliance and consistent quality.
- Commercial Sanitation** — Serves as a natural, effective cleaning agent for sanitizing food-grade kitchen surfaces and processing equipment.

STORAGE & HANDLING

Because this product is classified as a flammable liquid and poses a risk of skin corrosion, it must be stored in a cool, well-ventilated area away from ignition sources. Proper containment prevents the release of hazardous vapors and protects staff from accidental exposure.

- Store in a cool, dry place away from direct sunlight.
- Use HDPE containers for storage to prevent chemical reactions.
- Avoid contact with strong oxidizing agents and bases.
- Ensure proper ventilation in storage areas to prevent vapor accumulation.
- Wear appropriate personal protective equipment (PPE) when handling.

AVAILABLE PACKAGING

- 1 Quart
- 1 Gallon
- 5 Gallon
- 15 Gallon
- 55 Gallon
- 275 Gallon
- 330 Gallon

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **Danger**



Hazard Statements:

- H226: Flammable liquid and vapor [Warning Flammable liquids]
- H314: Causes severe skin burns and eye damage [Danger Skin corrosion/irritation]

Emergency Contact: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

For complete safety information, refer to the Safety Data Sheet (SDS) for this product.

Disclaimer: The information contained herein is believed to be accurate and represents the best information currently available to us. However, Alliance Chemical makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.